

WHAT IS CLAIMED IS:

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1. A method for instruction processing,  
comprising:

10 a first step of identifying a  
classification of a functional unit which can  
execute a basic instruction;

15 a second step of determining whether said  
basic instruction can be assigned to a logical  
instruction slot through checking a relationship  
between said classification of said functional unit  
and said logical instruction slot; and

a third step of assigning, to an  
instruction slot, said basic instruction determined  
to be assignable to said logical instruction slot.

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2. The method for instruction processing  
as claimed in claim 1, wherein said first step is  
25 divided into a first sub-step of identifying an  
instruction category of a basic instruction, and a  
second sub-step of identifying a classification of a  
functional unit which can execute said instruction  
category.

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3. The method for instruction processing  
35 as claimed in claim 1, further comprising  
a step, prior to said third step, for  
checking a relationship between said basic

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instruction that can be assigned to said logical instruction slot and other basic instructions to be assigned to other logical instruction slots.

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4. The method for instruction processing as claimed in claim 2, further comprising  
10 a step, prior to said third step, for checking a relationship between said basic instruction that can be assigned to said logical instruction slot and other basic instructions to be assigned to other logical instruction slots.

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5. The method for instruction processing as claimed in claim 3, wherein said second step  
20 includes a step of identifying said logical instruction slot having a lowest numeral determined to be assignable.

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6. The method for instruction processing as claimed in claim 4, wherein said third step  
30 includes a step of identifying said logical instruction slot having a lowest numeral determined to be assignable.

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7. The method for instruction processing

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as claimed in claim 3, wherein all of said steps are repeated for all instruction slots.

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8. The method for instruction processing as claimed in claim 4, wherein all of said steps are repeated for all instruction slots.

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9. A computer program, comprising:  
15 a first step of identifying a classification of a functional unit which can execute a basic instruction;  
a second step of determining whether said basic instruction can be assigned to a logical  
20 instruction slot through checking a relationship between said classification of said functional unit and said logical instruction slot; and  
a third step of assigning, to an instruction slot, said basic instruction determined  
25 to be assignable to said logical instruction slot.

30 10. The computer program as claimed in claim 9, wherein said first step is divided into a first sub-step of identifying an instruction category of a basic instruction, and a second sub-step of identifying a classification of a functional  
35 unit which can execute said instruction category.

11. The computer program as claimed in  
claim 9, further comprising

5       a step, prior to said third step, for  
checking a relationship between said basic  
instruction that can be assigned to said logical  
instruction slot and other basic instructions to be  
assigned to other logical instruction slots.

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12. The computer program as claimed in  
15 claim 10, further comprising

20       a step, prior to said fourth step, for  
checking a relationship between said basic  
instruction that can be assigned to said logical  
instruction slot and other basic instructions to be  
assigned to other logical instruction slots.

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